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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: John E. Holland et al.
Serial No.: 10/075,786
Filed: February 13, 2002
Confirmation No.: 9809
For: **PROTECTIVE COVER**

Examiner: William H. Mayo, III
Group No.: 2831

#10 | Appeal Brief
J. EVANS
9.2.03

Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Board of Patent Appeals and Interferences

Sir:

APPELLANT'S BRIEF PURSUANT TO 37 CFR 1.192

This brief is in furtherance of the Notice of Appeal filed in this case on May 2, 2003. A check is enclosed in the amount of \$160.00 for the brief fee. If any additional fees for the accompanying Appeal Brief are required, Appellant requests that this be considered a petition therefor. The Commissioner is hereby authorized to charge any additional fees which may be required to Deposit Account No. 09-0528.

This brief is transmitted *in triplicate*.

By a separate paper filed contemporaneously herewith, Applicant has requested an oral hearing.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is JHRG, LLC, of Spring Hope, North Carolina.

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II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known to Appellant or Appellant's legal representative which will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

The claims in the application are 1 – 40 and are reproduced in the Appendix hereto. Claims 1–40 stand rejected; however, as stated hereinbelow, Applicant cancels Claims 14-26. The Examiner also asserts a provisional double patenting rejection with respect to Claims 1-13 as claiming the same invention as that of Claims 1-13 of copending Application No. 09/860,423. Applicant respectfully submits that this issue will be resolved upon remand of this case to the Examiner.

IV. STATUS OF AMENDMENTS

An amendment is filed contemporaneously herewith to cancel Claims 14-26. Accordingly, Applicant requests that Claims 14-26 be withdrawn from further consideration.

V. SUMMARY OF THE INVENTION

Applicant's invention is directed to a rather simple, yet effective, lightweight, abrasion-resistant, cut-resistant, and tear-resistant protective fabric cover for lengths of material, such as ropes, that are used in environments where they are subjected to high wear and tear conditions. In such environments conventional fabric coverings of such materials as nylon, polyester, polyethylene, and other polymeric yarns have been unsatisfactory in that they quickly wear out, are damaged, or are exposed to damaging chemicals. These environments include marine terminals, airports, power lines, and underwater lines and cables, etc. The only known previous attempts have been to make heavier fabric coverings or go to metal and polymeric sheeting.

Such solutions result in the lengths of materials, e.g., ropes, etc. being heavier and harder to manage. The problem has, therefore, remained unsolved.

The present invention solves the problem by adopting for use a lightweight, but very strong, fabric cover constructed of high performance yarns, i.e., those defined in the present application as yarns having a tensile modulus equal to or greater than 150 grams/denier and a tenacity greater than about 7 grams/denier. Protective covers formed from one of these yarns have a high level of tear-resistance, abrasion-resistance, cut and stab resistance, ultraviolet radiation resistance, and resistance to chemicals and low temperatures. While fabric formed from these high performance yarns are substantially more expensive, the fabric so formed is lightweight, is much more durable, and requires much less frequent replacement.

VI. ISSUES

The basic issue on appeal is whether or not the invention is made obvious to one of ordinary skill in the art by modifying the teaching of Andrieu (U.S. Patent No. 5,300,337) with Holland et al. (U.S. Patent No. 5,395,682), Kite, III et al. (U.S. Patent No. 4,891,256), and/or Holt et al. (U.S. Patent No. 5,070,597); and to modify the teaching of Ratigan (U.S. Patent No. 5,441,790) in view of Holland et al. This Board is being asked to review and reverse the Examiner's rejections of Claims 1-13 and 27-40 under 35 U.S.C. § 103(a).

VII. GROUPING OF CLAIMS

Claims 1-13 and 27-40 may be considered together.

VIII. ARGUMENTS

A. Examiner's Objections to the Drawings

The Examiner has objected to the substitute drawings submitted on January 21, 2003 as not being in conformance with the cross-hatching requirements of MPEP 608.02. Applicant respectfully disagrees. On Pages 7 and 8 of Applicant's specification, Applicant identifies items 64, 72 as rubber, and items 66, 74 as abrasion-resistant material (fabric). The cross-hatching for those materials is correctly used in Figures 5a and 5b of the pending application. This was discussed with the Examiner on June 30, 2003.

B. Claims Objections

The Examiner objects to Claims 1-13 as being a substantial duplicate of Claims 14-26. By an amendment filed contemporaneously herewith, Claims 14-26 have been cancelled. The Examiner's objection to Claim 15 is therefore now moot.

C. Rejections Under 35 U.S.C. § 103

The Examiner rejects Claims 1-9, 14-22, and 27-35 under 35 U.S.C. 103(a) as being unpatentable over Andrieu in view of Holland et al. Claims 10-12, 24-26, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrieu in view of Holland et al., further in view of Kite, III et al. Claims 13, 26, and 39 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Andrieu in view of Holland et al., as applied to Claims 1, 14, and 27, further in view of Holt et al. Claim 40 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ratigan in view of Holland et al. As Claims 14-26 are cancelled, Applicant's remarks will be limited to Claims 1-13 and 27-40.

1. The Prior Art is Different

Andrieu et al. is directed to a conventional wrap-around cover for cables and hoses made primarily of polyester yarns. Andrieu et al. emphasizes that the cover is of relatively low cost (Col. 1, Line 49). The Andrieu et al. cover is not formed of high performance yarns as claimed in the present invention. Again, the Andrieu et al. device is formed of low cost polyester monofilament and multifilament yarns. While Andrieu et al. mentions, in general terms, abrasion and heat resistance, there is no mention of the type of environment for which the covers of the present invention are intended. Further, Andrieu et al. does not describe how or why fabric formed from the disclosed polyester yarns could possibly be deemed abrasion-resistant. In fact they are not to the extent required by the present invention. Further, Andrieu et al. does not even recognize tearing and cutting of the fabric sleeve, or chemical environments, as problems to be solved by his wraparound closure. As such, Andrieu et al. neither recognizes nor solves the problems addressed by the present invention.

Ratigan is also directed to a wraparound device that is formed of relatively low cost materials such as nylon, polypropylene, or polyester. Ratigan is not interested in the type of material, but rather a device which binds to the rope by its own means. Thus, Ratigan is attempting to solve an entirely different problem. However, as with Andrieu et al., the Ratigan device is merely exemplary of the covers that represent the problem in the first place. The Ratigan device is also not formed of high performance yarns as defined in Applicant's specification. Further, Ratigan also does not recognize tearing and cutting of the fabric as problems to be solved by his wraparound device.

Holland et al. is directed to a cargo curtain, not a protective sleeve, and as such is non-analogous. Holland et al. is specifically directed to solving a different problem, i.e., limited life fabric cargo covers that are subject to inadvertent ripping and tearing, such as might be caused by forklift tines.

Kite, III et al. is directed to a wraparound closure device, again made from inexpensive polyester. The device is formed as a braided fabric which is an axially compressible, radially expandable elongate tubular member. The Kite, III et al. device is intended for the tight bundling of a plurality of cables to reduce abrasiveness between cables (Col. 1, Lines 25-29). Kite, III et al. does not employ, or suggest, high performance yarns to form an abrasion-resistant, cut-resistant, and tear-resistant protective cover.

Holt et al. is not at all relevant to Applicant's invention; rather, Holt et al. is directed to a double-walled tube formed of two walls of extruded rubber sheeting with friction reducing material therebetween that can be continuously revolved around an elongate member by relative sliding motion between the two walls of the double-walled construction. It is in no way, shape, or form a fabric and cover formed of the same material as the cover.

2. The Examiner Has Failed to Justify the Proposed Modification to the Primary Reference

It is the burden of the Examiner to establish a *prima facie* case of obviousness when rejecting claims under 35 U.S.C. §103. In re Reuter, 651 F.2d 751, 210 USPQ 249 (CCPA 1981). The CAFC (and the CCPA before it) have repeatedly held that, absent a teaching or suggestion in the primary reference for the need, arbitrary modifying of a primary reference or combining of references is improper. The ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). In re Gieger, 815 F. 2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

3. Claims 1-9 and 27-35 are not suggested by Andrieu et al., which is not helped by Holland et al.

The Examiner relies on Andrieu et al. as his primary reference in rejecting Claims 1-9 and 27-35. As previously stated, the Andrieu et al. device is not formed from high performance yarns having the claimed characteristics, and is merely an example of covers existing in the field and evidencing the problem confronted by Applicant.. The applicant has defined (and the claims recite) high performance yarns as yarns having a tensile modulus equal to or greater than 150 grams/denier and a tenacity equal to or greater than 7 grams/denier so that the protective cover is abrasion-resistant, cut-resistant, and tear-resistant. Further, the applicant indicates that some illustrative high performance yarns are those yarns formed from polymers selected from the group consisting of long chain polyethylenes, high strength aramids, liquid crystal polymers, and combinations thereof. The Examiner states that polyester is a high performance yarn. He is just wrong! Nothing in the record suggests that polyester is such a yarn, and the Examiner has pointed to nothing that would suggest that polyester is a high performance yarn. People in the textile art do not consider polyester as a “high performance” yarn. Rather, Andrieu et al is formed from inexpensive polyester monofilament and multifilament yarns.

The Examiner asserts that Holland teaches a protective cover formed of an abrasion-resistant, cut-resistant, and tear-resistant fabric. That is true, but the Holland et al. cover is a cargo cover, not a cover for cables and hoses. It is made of high performance yarns for entirely different reasons (protection from forklift tines and shifting loads). Further, the Examiner has not, in any way, explained why one skilled in the cable and hose cover art would be motivated to modify Andrieu et al. at all. The mere fact that references can be combined or modified does not

render the resultant combination obvious unless the prior art suggests the desirability of the combination. In re Mills, 16 USPQ2d 1430 (Fed. Cir. 1990). Here, just the opposite is the case. There is not a scintilla of motivation or suggestion that would prompt one of ordinary skill in the art to combine Holland with Andrieu et al. As the Court of Appeals for the Federal Circuit held in Al-Site Corp. v. VSI Int'l Inc., 50 USPQ2d 1161 (Fed. Cir. 1999), the level of ordinary skill in the art cannot be relied upon to provide the suggestion to combine references. Further, when the incentive to combine references is not immediately apparent, the Examiner has the burden and duty to explain why the combination is proper. Ex parte Clapp, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985). The Examiner has not done so; rather the Examiner has pieced together Andrieu et al. and Holland et al. based on Applicant's specification. As the Federal Circuit has stated:

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

In re Fritch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992).

Andrieu et al. actually teaches away from Applicant's invention. Specifically, an objective of Andrieu et al. is to provide a low cost device. Polyester makes such a low cost cover and polyester is a low cost fabric. While the Examiner believed that there is no substantial difference in costs between polyester and Spectra (long chain polyethylene), Spectra is significantly more expensive. Depending somewhat upon the denier, polyester yarn costs between about \$2.50 and \$6.00 a pound. Spectra, on the other hand, costs between about \$25.00 and \$40.00 per pound. Spectra therefore is on the order of 7-10 times as expensive as polyester. To substitute Spectra for the polyester in Andrieu et al.'s device would simply defeat the objectives of the Andrieu et al. inexpensive wraparound closure.

Additionally, while Andrieu et al. mentions, in general terms, abrasion and heat resistance, Andrieu et al. does not describe how or why fabric formed from the disclosed polyester yarns could possibly be deemed abrasion-resistant. Further, Andrieu et al. was not concerned with the environments for which the present cover was developed and does not even recognize tearing and cutting of the fabric sleeve as problems to be solved by the wraparound closure. Simply, polyester is not a high performance, cut-resistant or tear-resistant, material.

Applicant further disagrees that the selection of a material is a matter of obvious design choice. The Board of Patent Appeals and Interferences has held this assertion to be an “unsupported conclusion—not a reason upon which to base the rejection.” In re Garrett, 33 BNA PTCJ 43 (November 13, 1986). The “obvious design choice” rejection has also been flatly rejected by the Federal Circuit where there is no teaching or suggestion in the reference to modify its own structure in the manner of the rejected claim. In re Chu, 66 F.3d 292, 36 USPQ 2d 1089 (Fed. Cir. 1995). As support for his position, the Examiner cites In re Leshin, 125 USPQ 416. Applicant respectfully submits that the Examiner’s citation does not support his position; rather, it supports Applicant’s position. In Leshin, while the Court of Customs and Patent Appeals held that to form a container-dispenser of plastic would be obvious, the Court also noted that they based this decision on the fact that plastic containers of the same type were known and not new. Id. at 418. That is precisely the opposite of Applicant’s situation. Protective fabric covers for cables and hoses have not heretofore been formed of high performance yarns having a tensile modulus equal to or greater than 150 grams/denier and a tenacity equal to or greater than 7 grams/denier.

4. Claims 10-12 and 36-38 are not suggested by Andrieu et al.

The Examiner proposes to combine the wraparound closure device of Andrieu et al., as modified by Holland et al., and the axially compressible and radially expandable device of Kite, III et al. Specifically, the Examiner relies on Figure 3 to show a plurality of bands. As argued above, Andrieu et al. cannot be properly modified by Holland et al. Further, the Examiner again provides no explanation how or why one of ordinary skill would be motivated to modify Andrieu et al., and there is no teaching, suggestion, or motivation in Andrieu et al. for such a modification.

5. Claims 13 and 39 are not unpatentable, as there is no suggestion or possible way to modify Andrieu et al. to incorporate a hood.

The Examiner next proposes to further modify the fabric cover of Andrieu et al. adding the cargo cover of Holland et al. and the tubular rubber member of Holt et al. to obtain a protective cover with a fabric hood fastened to at least one end. This just cannot be done. The Examiner is again piecing together references without any explanation or rationale for such a combination. Andrieu et al. is directed to a fabric cover for the bundling of elongated articles so that they are not damaged by moving machinery parts or the like. That is, the Andrieu et al. cover is intended for the installation and protection of bundled hoses and cables having ends permanently connected to the mechanical components of an automobile or other machine. Even assuming the rubber article of Holt could be attached to the fabric cover of Andrieu et al. (which it cannot without considerable further modification), there would simply be no need to protect the ends of such cables and hoses since they are presumably not disconnected. To even have such a hood fastened to at least one end would likely seriously interfere with the operation of a vehicle or other machine. That is, it would destroy Andrieu et al.'s device, and violate the long

standing holding that any modification that would destroy the invention of the reference cannot serve as a proper reference under 103(a). In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

With respect to the Examiner's rationale and conclusion that he had made out a prima facie case of obviousness, Applicant respectfully submits that the Examiner is in error. The Examiner cites In re Fine, 5 USPQ2d 1596 (Fed. Cir. 1988), and In re Jones, 21 USPQ2d 1941 (Fed. Cir. 1992). Applicant submits that these cases are on point; however, they support Applicant's position. In Fine, the court found that there was no suggestion in the primary reference (Eads) to use an arrangement in the secondary reference (Warnick); rather, the court found that the primary reference actually taught away from the appellant's invention. Id. at 1599. That is precisely the situation in the present case. Andrieu et al. teaches away from Applicant's invention; i.e., Andrieu highlights the need for a "relatively low cost system". (Col. 1, Lines 47-54). Andrieu et al. does not suggest or provide the motivation to use a material that is many times more expensive. With respect to Jones, reciting In re Fine, the court held that the PTO had provided no evidence that one of ordinary skill would have been motivated to make the proposed modification of the prior art.

6. Claim 40 is not suggested by the combination of Ratigan and Holland et al.

As pointed out above, Ratigan does not teach the use of a protective sleeve formed of "high performance" yarns having high tensile strength and tenacity as claimed. Ratigan is not interested in the type of material, but rather a device which binds to the rope by its own means. Thus, Ratigan is attempting to solve an entirely different problem. As with the Examiner's attempt to combine Andrieu et al. with Holland et al., the Examiner has not explained why one

skilled in the art would be motivated to modify Ratigan at all, and particularly with the expensive fabric of Holland. Again, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination.

D. Conclusion

Since the Examiner's rejection of the claims based on the prior art has been shown to be inappropriate, the rejection should be reversed and the case remanded to the Examiner for allowance of pending claims 1-13 and 27-40. Such action is earnestly solicited.

Respectfully submitted,



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Date: July 2, 2003

File No.: 3781-022 (0024.1)

APPENDIX

Claims in the Application:

1. A protective cover for lengths of material used in environments in which said lengths of material are subjected to abrasion, chemicals, or weather extremes, said protective cover comprising a sleeve surrounding said length of material, said sleeve having open ends and formed of a fabric made substantially of high performance yarns having a tensile modulus equal to or greater than 150 grams/denier and a tenacity equal to or greater than 7 grams/denier so that the protective cover is abrasion-resistant, cut-resistant, and tear-resistant.
2. The protective cover of Claim 1 wherein said fabric is formed from at least 70 percent high-strength yarns.
3. The protective cover of Claim 1 wherein said fabric has a weight of between about 5 and 8 ounces per square yard.
4. The protective cover of Claim 1 wherein said fabric is resistant to petroleum-based products.
5. The protective cover of Claim 1 wherein said high performance yarns are formed from polymers selected from the group consisting of long chain polyethylenes, high strength aramids, liquid crystal polymers, and combinations thereof.
6. The protective cover of Claim 5 wherein said high performance yarns are about 400 to 1000 denier.
7. The protective cover of Claim 6 wherein said fabric has a warp and fill density of between about 30 and 36 ends per inch.

8. The protective cover of Claim 1 wherein said sleeve is formed as an elongated sheet having opposed longitudinal edges, said opposed longitudinal edges including means releasably attaching said opposed longitudinal edges together around the length of said material.
9. The protection cover of Claim 8 wherein said means for fastening said opposed longitudinal edges comprises hook and loop material.
10. The protective cover of Claim 1 wherein said sleeve is formed as a plurality of bands, each band comprising a short length of said fabric, said bands being spaced apart along the length of said material.
11. The protective cover of Claim 10 wherein each of said bands is formed as a short length of fabric having opposed longitudinal edges, said opposed longitudinal edges including means for fastening said opposed longitudinal edges together around the length of said material.
12. The protection cover of Claim 11 wherein said means for fastening said opposed longitudinal edges comprises hook and loop material.
13. The protective cover of Claim 1 further including a hood formed of the same fabric as said sleeve and fastened to at least one end of said sleeve for protecting an exposed end of said length of material.
14. A protective cover for lengths of material used in environments in which said lengths of material are subjected to abrasion, chemicals, or weather extremes, said protective cover comprising a sleeve surrounding said length of material, said sleeve having open ends and formed of a fabric made substantially of high performance yarns having a tensile modulus equal to or greater than 150 grams/denier and a tenacity equal to or greater than 7 grams/denier so that the protective cover is abrasion-resistant, cut-resistant, and tear-resistant.
15. The protective cover of Claim 14 wherein said fabric is formed from at least 70 percent high-strength yarns.

16. The protective cover of Claim 14 wherein said fabric has a weight of between about 5 and 8 ounces per square yard.
17. The protective cover of Claim 14 wherein said fabric is resistant to petroleum-based products.
18. The protective cover of Claim 14 wherein said high performance yarns are formed from polymers selected from the group consisting of long chain extended polyethylenes, high strength aramids, liquid crystal polymers, and combinations thereof.
19. The protective cover of Claim 18 wherein said high performance yarns are about 400 to 1000 denier.
20. The protective cover of Claim 19 wherein said fabric has a warp and fill density of between about 30 and 36 ends per inch.
21. The protective cover of Claim 14 wherein said sleeve is formed as an elongated sheet having opposed longitudinal edges, said opposed longitudinal edges including means releasably attaching said opposed longitudinal edges together around the length of said material.
22. The protection cover of Claim 21 wherein said means for fastening said opposed longitudinal edges comprises hook and loop material.
23. The protective cover of Claim 14 wherein said sleeve is formed as a plurality of bands, each band comprising a short length of said fabric, said bands being spaced apart along the length of said material.
24. The protective cover of Claim 23 wherein each of said bands is formed as a short length of fabric having opposed longitudinal edges, said opposed longitudinal edges including means for fastening said opposed longitudinal edges together around the length of said material.

25. The protection cover of Claim 24 wherein said means for fastening said opposed longitudinal edges comprises hook and loop material.

26. The protective cover of Claim 14 further including a hood formed of the same fabric as said sleeve and fastened to at least one end of said sleeve for protecting an exposed end of said length of material.

27. An abrasion-resistant, cut-resistant, and tear-resistant protective cover system, comprising:

- (a) a length of material that must be periodically moved or pulled across abrasive surfaces; and
- (b) a protective sleeve having open ends surrounding said length of material and formed from a fabric made substantially of high performance yarns having a tensile modulus equal to or greater than 150 grams/denier and a tenacity equal to or greater than 7 grams/denier, wherein said protective sleeve is abrasion-resistant, cut-resistant, and tear-resistant.

28. The system of Claim 27 wherein said fabric is formed from at least 70 percent high-strength yarns.

29. The system of Claim 27 wherein said fabric has a weight of between about 5 and 8 ounces per square yard.

30. The system of Claim 27 wherein said fabric is resistant to petroleum-based products.

31. The protective cover of Claim 27 wherein said high performance yarns are formed from polymers selected from the group consisting of long chain polyethylenes, high strength aramids, liquid crystal polymers, and combinations thereof.

32. The system of Claim 31 wherein said high performance yarns are about 400 to 1000 denier.
33. The system of Claim 32 wherein said fabric has a warp and fill density of between about 30 and 36 ends per inch.
34. The system of Claim 27 wherein said sleeve is formed as an elongated sheet having opposed longitudinal edges, said opposed longitudinal edges including means for releasably attaching said opposed longitudinal edges together around the length of said material.
35. The system of Claim 34 further including means for securing said open ends of the sleeve to said length of material.
36. The system of Claim 27 wherein said sleeve is formed as a plurality of bands, each band comprising a short length of said fabric, said bands being spaced apart along the length of a material to be protected.
37. The system of Claim 36 wherein each of said bands is formed as a short length of fabric having opposed longitudinal edges, said opposed longitudinal edges including means for fastening said opposed longitudinal edges together around the length of a material to be protected.
38. The system of Claim 37 wherein said means for fastening said opposed longitudinal edges comprises hook and loop material.
39. The system of Claim 27 further including a hood formed of the same fabric as said sleeve and fastened to at least one end of said sleeve for protecting an exposed end of said length of material.
40. An abrasion-resistant rope that must be periodically moved or pulled across abrasive services comprising an outer protective layer formed substantially from high performance yarns

having a tensile modulus equal to or greater than 150 grams/denier and a tenacity equal to or greater than 7 grams/denier so that the protective layer is abrasion-resistant, cut-resistant, and tear-resistant.